

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
6 January 2005 (06.01.2005)

PCT

(10) International Publication Number
WO 2005/001099 A2

(51) International Patent Classification⁷: C12N 15/62

(21) International Application Number: PCT/GB2004/002779

(22) International Filing Date: 25 June 2004 (25.06.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0314856.6 25 June 2003 (25.06.2003) GB
60/499,146 29 August 2003 (29.08.2003) US

(63) Related by continuation (CON) or continuation-in-part (CIP) to earlier application:
US 60/499,146 (CIP)
Filed on 29 August 2003 (29.08.2003)

(71) Applicant (for all designated States except US): UNITAR-GETING RESEARCH AS [NO/NO]; Thormøhlensgate 55, N-5008 Bergen (NO).

(72) Inventors; and

(75) Inventors/Applicants (for US only): HESKETH, John [GB/GB]; 5 Honister Avenue, Jesmond, Newcastle-Upon-Tyne NE2 3PA (GB). RAVNEBERG, Hanne [NO/NO]; Bekkeveien 9, N-5096 Bergen (NO). GJERDRUM, Christine [NO/NO]; Nicolaysensvei 4, N-5063 Bergen (NO). TAULER, Albert [ES/ES]; Tirant Lo Blanc, 31, Sant Feliu del Llobregat, E-08980 Barcelona (ES). PRYME, Ian [GB/NO]; Nattlandsfjellet 120, N-5098 Bergen (NO). STERN, Beate [DE/NO]; Saedalsveien 26, N-5098 Bergen (NO).

(74) Agent: FRANK B. DEHN & CO., 179 Queen Victoria Street, London EC4V 4EL (GB).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW.

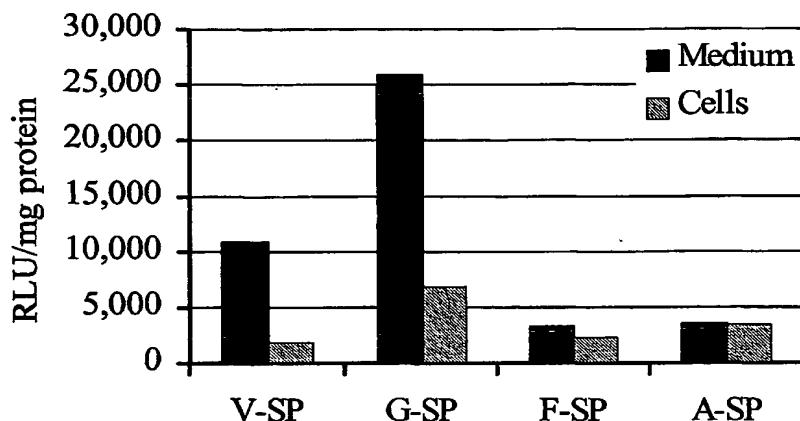
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— without international search report and to be republished upon receipt of that report

[Continued on next page]

(54) Title: PROTEIN EXPRESSION SYSTEM



WO 2005/001099 A2

(57) Abstract: The present invention relates to a method of producing a target protein, which method comprises expressing said protein in a host cell which contains a nucleic acid molecule which encodes a chimeric protein, said chimeric protein comprising a signal peptide from a non-mammalian bulk-secreted protein and said target protein; nucleic acids, vectors, host cells and kits for carrying out the method are also described.



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

CORRECTED VERSION

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
6 January 2005 (06.01.2005)

PCT

(10) International Publication Number
WO 2005/001099 A2

(51) International Patent Classification⁷: C12N 15/62

(21) International Application Number: PCT/GB2004/002779

(22) International Filing Date: 25 June 2004 (25.06.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0314856.6 25 June 2003 (25.06.2003) GB
60/499,146 29 August 2003 (29.08.2003) US

(63) Related by continuation (CON) or continuation-in-part (CIP) to earlier application:
US 60/499,149 (CIP)
Filed on 29 August 2003 (29.08.2003)

(71) Applicant (for all designated States except US): UNITAR-GETING RESEARCH AS [NO/NO]; Thormøhlensgate 55, N-5008 Bergen (NO).

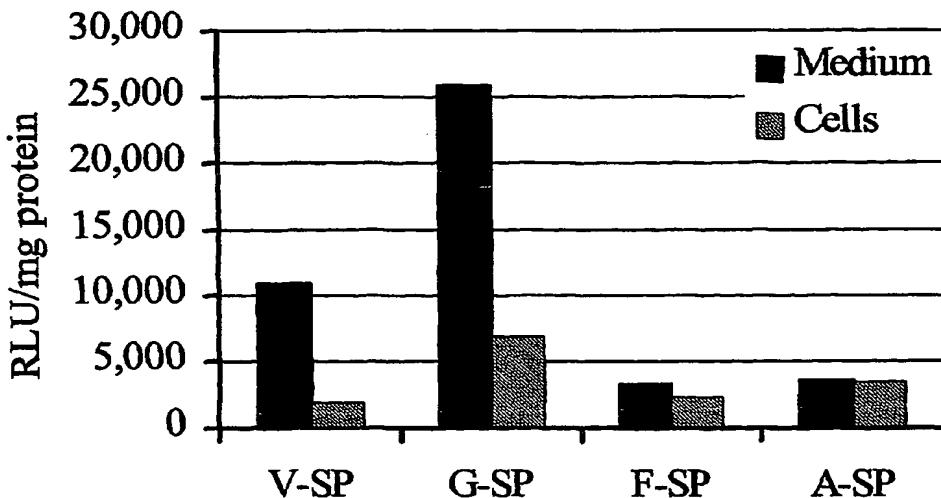
(72) Inventors; and
(75) Inventors/Applicants (for US only): HESKETH, John [GB/GB]; 5 Honister Avenue, Jesmond, Newcastle-Upon-Tyne NE2 3PA (GB). RAVNEBERG, Hanne [NO/NO]; Bekkeveien 9, N-5096 Bergen (NO). GJERDRUM, Christine [NO/NO]; Nicolaysensvei 4, N-5063 Bergen (NO). TAULER, Albert [ES/ES]; Tirant Lo Blanc, 31, Sant Feliu del Llobregat, E-08980 Barcelona (ES). PRYME, Ian [GB/NO]; Nattlandsfjellet 120, N-5098 Bergen (NO). STERN, Beate [DE/NO]; Saedalsveien 26, N-5098 Bergen (NO).

(74) Agent: FRANK B. DEHN & CO.; 179 Queen Victoria Street, London EC4V 4EL (GB).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,

[Continued on next page]

(54) Title: PROTEIN EXPRESSION SYSTEM



WO 2005/001099 A2

(57) Abstract: The present invention relates to a method of producing a target protein, which method comprises expressing said protein in a host cell which contains a nucleic acid molecule which encodes a chimeric protein, said chimeric protein comprising a signal peptide from a non-mammalian bulk-secreted protein and said target protein; nucleic acids, vectors, host cells and kits for carrying out the method are also described.



TN, TR, TT, TZ, UA, UG, US (patent), UZ, VC, VN, YU, ZA, ZM, ZW.

(48) Date of publication of this corrected version:
2 June 2005

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(15) Information about Correction:
see PCT Gazette No. 22/2005 of 2 June 2005, Section II

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Published:

- without international search report and to be republished upon receipt of that report

WO 2005/001099 A3

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
6 January 2005 (06.01.2005)

PCT

(10) International Publication Number
WO 2005/001099 A3

(51) International Patent Classification⁷: C12N 15/62, 15/63, 9/02, C07K 19/00, C12N 5/10, C12P 21/02

(21) International Application Number: PCT/GB2004/002779

(22) International Filing Date: 25 June 2004 (25.06.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data: 0314856.6 25 June 2003 (25.06.2003) GB
60/499,146 29 August 2003 (29.08.2003) US

(63) Related by continuation (CON) or continuation-in-part (CIP) to earlier application:
US 60/499,149 (CIP)
Filed on 29 August 2003 (29.08.2003)

(71) Applicant (for all designated States except US): UNITAR-GETING RESEARCH AS [NO/NO]; Thormøhlensgate 55, N-5008 Bergen (NO).

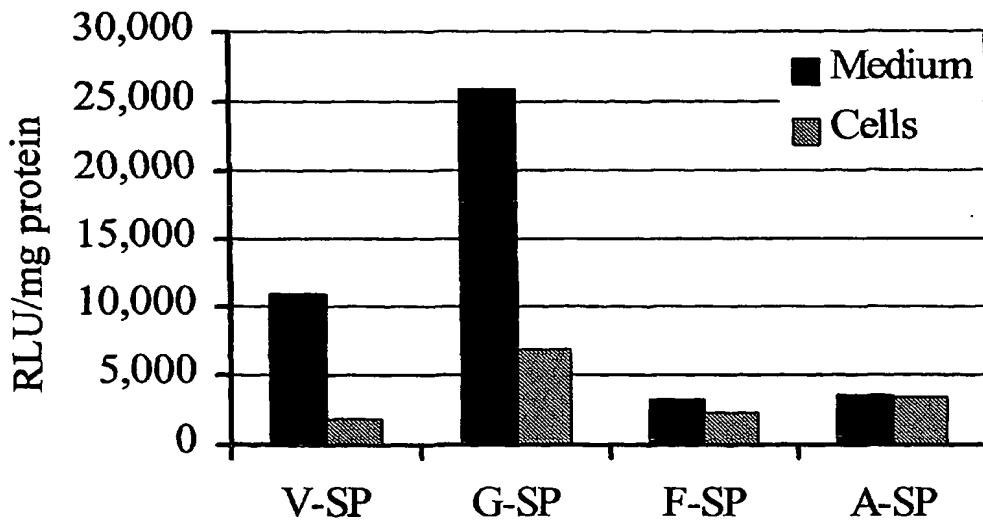
(72) Inventors; and
(75) Inventors/Applicants (for US only): HESKETH, John [GB/GB]; 5 Honister Avenue, Jesmond, Newcastle-Upon-Tyne NE2 3PA (GB). RAVNEBERG, Hanne [NO/NO]; Bekkeveien 9, N-5096 Bergen (NO). GJERDRUM, Christine [NO/NO]; Nicolaysensvei 4, N-5063 Bergen (NO). TAULER, Albert [ES/ES]; Tirant Lo Blanc, 31, Sant Feliu del Llobregat, E-08980 Barcelona (ES). PRYME, Ian [GB/NO]; Nattlandsfjellet 120, N-5098 Bergen (NO). STERN, Beate [DE/NO]; Saedalsveien 26, N-5098 Bergen (NO).

(74) Agent: FRANK B. DEHN & CO.; 179 Queen Victoria Street, London EC4V 4EL (GB).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US (patent), UZ, VC, VN, YU, ZA, ZM, ZW.

[Continued on next page]

(54) Title: PROTEIN EXPRESSION SYSTEM



(57) Abstract: The present invention relates to a method of producing a target protein, which method comprises expressing said protein in a host cell which contains a nucleic acid molecule which encodes a chimeric protein, said chimeric protein comprising a signal peptide from a non-mammalian bulk-secreted protein and said target protein; nucleic acids, vectors, host cells and kits for carrying out the method are also described.



(84) **Designated States** (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— *with international search report*

(88) **Date of publication of the international search report:**
11 August 2005

(15) **Information about Correction:**

Previous Correction:
see PCT Gazette No. 22/2005 of 2 June 2005, Section II

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.